

Application No. 10/591,566
Response dated April 30, 2010
Reply to Office Action of April 21, 2010

REMARKS

Applicant respectfully requests entry of the Amendment and reconsideration of this application, as amended. Claims 1-37 have been rejected. Claims 1,12, 18, 23, and 32 have been amended.

The Examiner is thanked for the courteous phone discussion of this patent application at which time prior art and its relationship to pending claims were discussed.

Claims 1-9, 12-15, 18-20, 23-29, 32-35 have been rejected under 35 U.S.C. 102(b) as being anticipated by Flugstad (US 2002/0047009).

Although Flugstad mentions soil, it is done under the context of listing all of the applications used for heating, such as ceramics, welding, biological, and so forth. Flugstad never references soil as an application for the invention. Flugstad applies the invention to the heating of biological and foods without any mention of petroleum based applications, soils, or in-situ applications.

Claims 1-37 have been rejected under 35 U.S.C. 103(a) as obvious over Flugstad in view of Rowland (4,135,579).

Rowland teaches a method of radio frequency heating oil shale to cause fracturing of the formation. Rowland does not teach using radio frequency to lower the viscosity of the petroleum, just to fracture the formation. Rowland does not claim an apparatus, only methods.

The Applicant argues that there is no motivation or suggestions to combine Flugstad, and Rowland in the manner suggested by the Examiner, nor do any of the references provide any evidence to suggest the proposed combination.

To clarify the claims of the invention, the Applicant has added wording that specifies that the apparatus is specific to in-situ heating of a medium, the electrodes are in a subterranean environment, and the sensors are in a subterranean environments. The applicant has also differentiated the independent claims from Flugstad by adding, "a pump for extracting said heated hydrocarbonaceous medium above said subterranean environment".